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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,655

02/20/2004

Joong-gi Kwon

1349.1364

3476

21171 7590 01/08/2007  
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EXAMINER

PASCHALL, MARK H

ART UNIT

PAPER NUMBER

3742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/781,655

Applicant(s)

KWON ET AL.

Examiner

Mark H. Paschall

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,6 and 7 is/are rejected.  
7) ☒ Claim(s) 2-5,8-11 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,6,7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Traister---3,881,085. Traister teaches a fuser control and monitors the voltage level of a phase of voltage via winding 53 of the line voltage transformer. Paragraph 18 in Traister sets forth that , “when the charge on capacitor 70 reaches a predetermined level as determined by resistors 74,75, amplifier 66 is switched back to a non-conductive state. “. This turns on the heating power to the fuser element. It is clear that every cycle of voltage is monitored in Traister and if the cycle has a low amplitude or voltage amplitude, the fuser element is not energized. Scr 46 is controlled by line 69 and thus teaches a control unit to control the energization of the heater lamp, as claimed. Applicants attention is directed to paragraph 9 in Traister, Summary of the Invention, which states that, “it is an object of the present invention to provide a power controller for fusers permitting the fuser to be designed for minimum anticipated line voltages with the assurance that line voltages over and above the minimum line voltage will be accommodated without adverse effect on the fuser or fuser operation”.

***Allowable Subject Matter***

Claims 2-5,8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach the particular pulse delay circuit and control signal based on a comparison of the same with a pulse reference signal.

***Response to Arguments***

Applicant's arguments filed 10-05-2006 have been fully considered but they are not persuasive. Applicant's remarks on page 1 advance that Traister does not suggest or teach, "an AC voltage phase detection unit to detect a phase of the inputted AC voltage when a magnitude of the inputted AC voltage is over a predetermined level". Firstly, Traister does detect voltage levels, as claimed, and this voltage has a distinct phase. Hence, Traister does detect a phase of inputted AC voltage, as claimed. Paragraph 18 in Traister defines that when the charge on capacitor 70 reaches a predetermined level, amplifier 66 is switched to a nonconductive state. This then triggers heating power to the fuser element via Scr 46. It is very clear that the output of amplifier 66 does comprise a pulse generation unit. Means 71,70 and Scr 46 further comprises a control unit to control drive timing to energize the heating element as claimed. It should be noted that the triggering pulse signal from amplifier 66 does not

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occur if the inputted voltage is not over a predetermined level. Since Traister is interpreted satisfies all of the claim limitations in claim 1 as discussed above, Applicant's remarks advancing that Traister does not teach these limitations, is without merit. Likewise for claim 7 Traister teaches the similar claim limitations for these reasons. Applicant's attention is directed to the term "phase" throughout the remarks, but since every inputted AC voltage to a heater does have a specific phase, the term "phase" does not carry patentable weight. Any voltage-sensing unit for an ac inputted voltage would thus comprise a phase voltage detection unit. The term "phase" could be deleted from claim 1 without affecting the patentability of the claim. If deleted, claim 1 would merely define a voltage detection unit, notoriously conventional in the art as set forth in Traister. Basically, claim 1 and claim 7 merely and broadly define sensing of inputted voltage to a fuser and preventing fuser operation if the voltage inputted is below a predetermined level. Clearly, this is taught in the Traister system, as defined in the above rejection. For these reasons, Traister does anticipate the claim limitations set forth and the rejection is deemed proper.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

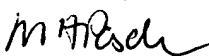
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark H. Paschall whose telephone number is 571 272-4784. The examiner can normally be reached on 7am - 3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Mark H Paschall  
Primary Examiner  
Art Unit 3742

Mp